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THE GENUS STENOONOPS (ARANEAE, OONOPIDAE) IN PANAMA AND THE WEST INDIES

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ABSTRACT. A total of seventeen species of the genus *Stenoonops* are recognized in this paper. Eleven species are described as new. Six of these are described from Jamaica, W. I., two from Puerto Rico, two from St. Thomas, U. S. Virgin Islands, and one from Antigua, B. W. I. *Scaphioides reducta* Bryant, 1942 from St. Croix, U. S. V. I., is placed in *Stenoonops*.

This is the fifth paper in the series planned for publication on the various genera in the Family Oonopidae in Central America and the West Indies.

Once more I take this opportunity to express my appreciation for the continued aid and encouragement extended to me by the staff of the Museum of Comparative Zoology, Harvard University. Grants GB-1801 and GB-5013 from the National Science Foundation have made it possible for me to carry on extensive collecting activities in Panama, Costa Rica, Florida, and the West Indies during the years 1963-1968 and to continue my studies in the Museum of Comparative Zoology during that period. My acknowledgements are gratefully extended to the following persons for the loan of types and other specimens to aid me in more completely understanding the genus under consideration: Dr. J. G. Sheals and Mr. D. J. Clark of the Department of Zoology, British Museum (Natural History); Dr. Willis J. Gertsch, recently retired from the American Museum of Natural History, New York City, and also Mr. Wilton Ivie, Research Fellow in the American Museum of Natural History.

The types of *Stenoonops phonetus* sp. nov. will be deposited in the American Museum of Natural History. All other types described in this paper together with my entire collection of the genus *Stenoonops* will be deposited in the Museum of Comparative Zoology, Harvard University.

Genus STENOONOPS Simon, 1891

The type species is *Stenoonops scabriculus* Simon by monotypy, based upon a male from St. Vincent, B. W. I., which I have had on loan for study. Since the recognition of the genus in 1891, only three additional new species have been recognized and assigned to this genus in the region at present under study. One additional species from St. Croix, U. S. Virgin Islands, was recognized as new by Miss Bryant and assigned to a new genus but is now included in *Stenoonops*. One species has been known only from females; one species has been known from both sexes; all others have been known only from males.

In addition to the general family characteristics, the features of the genus *Stenoonops* as observed in this study may be stated as follows: total length varies from about 1.1 mm to 2.1 mm. The general shape and height of the carapace differs considerably in the various species included in this paper. The ventral margin of the carapace is often plainly serrated. The eyes are six in number, arranged in two rows in a fairly compact group; the ALE are nearly always at least slightly the largest of the six and the distance between them varies considerably; the posterior row is typically somewhat recurved but occasionally is straight or gently procurved. The chelicerae, maxillae and lip usually appear to be without conspicuous modifications; a notable exception is furnished by *S. insolitus* sp. nov. The legs are moderately long and slender without great differences in length, without true spines but with many hairs and bristles. Trichobothria are present but their exact placement and specific differences among species have not been accurately determined. The male palp is simple and without special modifications except in the case of the tarsus, which exhibits a high degree of variation among the recognized species under study at the present time. In species like *S. portoricensis* and *S. insolitus* sp. nov., the distal palpal tarsal features are conspicuously characteristic, but in numerous other species, these structures are so obscure and so difficult to differentiate that errors are always confronting the investigator. Jets of semen extending from the distal end of the tarsal bulb are often quite conspicuous, sometimes deceptive and, perhaps, lead to erroneous conclusions regarding the extent and shape of the embolus. I think I have more difficulties in making decisions at this point than in any other genus thus far studied in the family Oonopidae. The abdomen is completely lacking a dorsal scutum but scuta are more or less well defined at the anterior end of the venter. Typically, there is a fairly well-defined epigastric

scutum reaching forward to meet the pedicel and a narrow ventral scutum, often overlooked in descriptions, just behind the genital groove. I think I have usually been able to discern these scuta even when they lack the usual yellowish or brownish coloration. The epigynal areas in females are also often very difficult to discern and to represent in drawings. In these cases reliance has been placed upon characteristics of the eyes, features of the carapace, sternum, etc. The spinnerets appear to be without special modifications; no chitinous sclerite has been observed at the base of the spinnerets as is so often observed in other genera in the family. A pair of dark-colored subsurface structures typically appear on the venter shortly anterior to the bases of the anterior spinnerets, but they are lacking in some species.

Although uncertainties still persist to trouble the author of this paper, it seems at this time that I must recognize a total of seventeen species of the genus *Stenoonops* from the region under consideration. This list may be given as follows: *Stenoonops cletus* sp. nov.; *Stenoonops dimotus* sp. nov.; *Stenoonops econotus* sp. nov.; *Stenoonops halatus* sp. nov.; *Stenoonops hoffi* sp. nov.; *Stenoonops insolitus* sp. nov.; *Stenoonops lucradus* sp. nov.; *Stenoonops macabus* sp. nov.; *Stenoonops minutus* Chamberlin and Ivie; *Stenoonops nitens* Bryant; *Stenoonops noctucus* sp. nov.; *Stenoonops padiscus* sp. nov.; *Stenoonops petrunkevitchi* Chickering; *Stenoonops phonetus* sp. nov.; *Stenoonops portoricensis* Petrunkevitch; *Stenoonops reductus* (Bryant); *Stenoonops scabriculus* Simon. Only one species is known from each of the following: Panama; St. Vincent, B. W. I.; and Antigua, B. W. I. Three species are known from Puerto Rico and six are known from Jamaica, W. I. Two species are known from St. Croix, U. S. V. I.; three are known from St. Thomas, U. S. V. I.; and four have been identified from St. John, U. S. V. I. Three males and two females from Virgin Gorda, British Virgin Islands, are at present assigned to *S. nitens* Bryant with some uncertainty. A single female from St. Lucia, B. W. I., is also, with some uncertainty, assigned to *S. nitens* Bryant. One species has been recorded from both North and South Bimini, Bahama Islands. Either because of ocular anomalies or the obscurity of features necessary for definite identification, a few specimens from the region under study have been left unassigned to any species.

STENOONOPS CLETUS sp. nov.

Figures 1-6

Holotype. The male holotype is from Jamaica, W. I., St. Catherine Parish, three miles east of May Pen, November 22, 1957.

The name of the species is an arbitrary combination of letters.

Description. Total length 1.28 mm, exclusive of the slightly extended spinnerets. Carapace 0.6 mm long; 0.46 mm wide opposite posterior border of second coxae where it is widest; 0.3 mm tall; rises somewhat just posterior to PME and then gently arches along midline to beginning of posterior declivity with tallest point shortly before the beginning of the declivity (Fig. 1 of paratype); with no median thoracic groove or pit; surface finely granular; sparsely covered by short, dark hair; ventral margin very finely serrated. Eyes: six in two rows as usual; in a compact group (Fig. 2); viewed from above, posterior row definitely recurved and occupies about three-fourths of width of carapace at that level. Ratio of eyes ALE : PME : PLE = 7 : 6 : 6. All eyes somewhat irregular in outline; long diameters always used for measurements. ALE separated from one another by about one-seventh of their diameter; separated from PME by about one-eighth of their diameter and from PLE by about one-third of the diameter of the latter. PME contiguous for nearly one-third of their circumference; tangent to PLE. Posterior row wider than anterior row in ratio of about 17 : 12. Only a moderate amount of black pigment in ocular region. Height of clypeus equal to about two-thirds of the diameter of ALE; clypeus somewhat convex and provided with six stiff bristles, two of these very long, others short. Chelicerae: vertical; essentially parallel; tapering gradually from base to tip; about 0.11 mm long; fang regularly curved and slender; no teeth observed along fang groove in dissected specimen; apparently without basal boss. Maxillae and lip essentially typical of the genus. Sternum: somewhat convex; finely granular; only moderately lobed and grooved; only a little longer than wide between second and third coxae; posterior end apparently somewhat bilobed and just opposite bases of fourth coxae which are separated by nearly 1.2 times their width. Legs: 4123 in order of length; true spines lacking but some bristles are spiniform. Palp: short; simple except for the tarsus which is normally inflated and inconspicuously terminated (Figs. 3-4); right palpal tarsus with a conspicuous jet of semen extended from embolus. Abdomen: ovoid; widest in the middle; 0.43 mm tall; quite typical of the genus in general; epigastric and ventral scuta fairly well outlined but division between the two very obscure; the pair of subsurface structures just anterior to spinnerets only dimly outlined. Color in alcohol: carapace a clear yellowish brown; sternum somewhat lighter; legs yellowish with some variations; abdomen yellowish white with some iridescence; scuta somewhat darker yellowish.

Female paratype. Total length 1.54 mm. Carapace 0.56 mm long; 0.44 mm wide; 0.26 mm tall; otherwise essentially as in male (Fig. 5). Eyes: in nearly all essential features, these seem to be in agreement with those of the male; ALE are somewhat further apart than in the male. Chelicerae, maxillae, lip, and sternum all nearly as described for the male holotype. Legs: 4123 in order of length as in male; palp probably without a claw; trichobothria observed but exact placement not determined. Abdomen: 1.04 mm long; regularly ovoid in shape; scuta and epigynal area essentially as shown in Figure 6.

Diagnosis. This species seems to be closely related to *Stenoonops nitens* Bryant. It differs from that species chiefly in the features of the male palp, the sternum, and the shape of the carapace.

Records. The described female paratype was taken with the male holotype. Male and female paratypes are in my collection from several localities in the following named parishes in Jamaica, W. I.: Trelawney; St. Andrew; St. Thomas; and St. Catherine.

STENOONOPS ECONOTUS sp. nov.

Figures 7-9

Holotype. The female holotype is from Puerto Rico, Mayagüez, University farm north of University campus, January 31, 1964. The name of the species is an arbitrary combination of letters.

Description. Total length 1.47 mm exclusive of the somewhat extended spinnerets; including these organs total length is 1.54 mm. Carapace 0.56 mm long; 0.4 mm wide opposite posterior borders of second coxae where it is widest; about 0.2 mm tall (Figs. 7-8); plainly serrated along ventral margins; gently arched along midline from PME to beginning of steep posterior declivity opposite third coxae; unevenly granular along lateral and posterior surfaces; no median thoracic groove or pit present. Eyes: six as usual in a compact group; occupy five-sixths of width of carapace at that level; posterior row gently recurved, viewed from above and wider than anterior row in ratio of about 16 : 13. Ratio of eyes ALE : PME : PLE = nearly 6 : 5 : 5. ALE separated from one another only by a broad line; separated from PME and PLE by nearly the same distance. PME contiguous to one another and barely separated from PLE. Height of clypeus equal to width of somewhat oval ALE. Chelicerae, maxillae, and lip apparently typical of females of the genus. Sternum: longer than wide in ratio of about 4 : 3; widest just behind second coxae at level of a lateral lobe; lobes and grooves well developed; posterior end

pointed and extended just opposite bases of fourth coxae which are separated by nearly 1.3 times their width. Legs: 4123 in order of length; otherwise as usual in the genus. Abdomen: ovoid and quite typical of the genus in general; the typical dark, ventral, sub-surface spots barely visible just anterior to spinnerets; epigastric and ventral scuta well outlined but occupy only about half the width of the venter at that level (Fig. 9); epigynal area obscurely distinctive. Color in alcohol: carapace a dark brown with irregular, darker, radiating, lateral and posterior streaks caused by concentrations of granulations; only a moderate amount of black pigment in ocular area; sternum a lighter yellowish brown; legs and mouth parts yellowish with variations; abdomen yellowish on dorsum with an irregular white, transverse band about two-thirds from base and a pair of white areas at anterior end; venter generally yellowish with scuta a light yellowish brown.

Diagnosis. This species appears to be somewhat closely related to *Stenoonops nitens* Bryant, but it differs from that species in respect to color pattern, scuta, and relative position of eyes.

Record. The male is unknown and there are no paratypes.

STENOONOPS NITENS Bryant

Figures 10-13

Stenoonops nitens Bryant, 1942: 321, figs. 5, 10. The holotype male from St. Croix, U. S. Virgin Islands, is in the Museum of Comparative Zoology, Harvard University, examined.

Numerous specimens of this species have been collected on St. Croix, and a male and a female have been selected for study; a brief report follows:

Male. Total length exclusive of the extended spinnerets and chelicerae 1.14 mm; including these structures total length is 1.26 mm. Carapace 0.53 mm long; 0.4 mm wide; nearly 0.18 mm tall (Fig. 10). Ratio of eyes ALE : PME : PLE = nearly 5 : 4.5 : 4. ALE separated from one another by nearly one-fourth of their diameter (Fig. 11). The clypeus is quite porrect and with height about equal to diameter of ALE. The scuta are fairly well outlined and closely similar to those of female but are less well delineated. The male palp is very obscure. The holotype was described as having "two very slender points at tip." I believe that these "points" are simply the lateral boundaries of the embolus, which extends as a very short tube that varies in appearance in different individuals and in different positions in the same individual (Fig. 12).

Female. Total length exclusive of the spinnerets and chelicerae 1.21 mm; including these structures total length is about 1.29 mm. Carapace nearly the same as in male. Figure 13 represents the abdominal scuta and epigynal area of the female.

The specimens now assigned to this species include a group regarded for a considerable length of time as another new species. At present they are regarded as what might be considered a variety by some taxonomists. My collection now contains many specimens of both sexes from the following localities: St. Croix, U. S. Virgin Islands, vicinity of Frederiksted, March, 1964 and September, 1966; several localities on St. Thomas, U. S. Virgin Islands, February, 1964 and July-August, 1966; St. John, U. S. Virgin Islands, March 1964 and September, 1966. Two females collected near Mayagüez, Puerto Rico, January, 1964, may possibly belong to this species. This suggests the probability that careful collecting in the West Indies will greatly extend the known territorial range of this species. A female collected in Costa Rica on Mt. Irazu on July 27, 1965, has been regarded as a possible member of this species but is now left unplaced.

STENOONOPS PORTORICENSIS Petrunkevitch

Figures 14-18

Stenoonops portoricensis Petrunkevitch, 1929: 72, figs. 61-63. The holotype male from Toa Alta, Puerto Rico, W. I., is in the American Museum of Natural History, New York City, examined. Roewer, 1942: 280; Bonnet, 1958: 4156.

I did not collect the male of this species during my period of field work in Puerto Rico in 1964. The male holotype is the only male specimen known at present and, unfortunately, it is in poor condition for study. The right palp, figured by Dr. Petrunkevitch, is missing, and I have found it impossible to see the parts in the left palp as originally described. More careful collecting is needed to add to our knowledge of the genus in this island. The female described here was for a time regarded as representing a new species but, following observations on the holotype and awaiting more complete knowledge regarding the species, I have decided to treat it as a female of *Stenoonops portoricensis*.

Female. Total length 1.63 mm, including the extended spinnerets; excluding the spinnerets, the total length is about 1.5 mm. Carapace 0.6 mm long; about 0.5 mm wide opposite second coxae where it is widest; about 0.31 mm tall; considerably raised behind

PME and then nearly level to beginning of steep posterior declivity; regularly rounded along ventral margin; closely similar to carapace of male holotype (Figs. 14, 18). Eyes: essentially as indicated for male in original description of holotype; ratio of eyes ALE : PME : PLE = nearly 6 : 6 : 5 (Fig. 15). Clypeus obscured by tuft of bristles. Mouth parts and legs appear essentially as described for the holotype male except for the palps; these parts with many short hairs but no true spines. Sternum: with many short, black hairs obscuring faintly indicated lobulations. Abdomen also with many short, black hairs as described for the male (Fig. 16); with a weakly outlined epigastric scutum occupying less than half the width of the venter and a very narrow ventral scutum; epigynal area very indistinct (Fig. 17).

Records. The described female is from the University farm north of the University campus, Mayagüez, Puerto Rico, January 25, 1964. Two females collected in the vicinity of Mayagüez have not yet been placed satisfactorily in any known species. Several specimens in the collection of the Museum of Comparative Zoology, tentatively assigned to this species, have been reassigned to other genera or left unplaced because of uncertainties.

STENOONOPS DIMOTUS sp. nov.

Figures 19-20

Holotype. The female holotype is from Jamaica, W. I., St. Andrew, Ferry, near Red Hills Road, October 28, 1957. The name of the species is an arbitrary combination of letters.

Description. Total length 2.09 mm, exclusive of the somewhat extended chelicerae; including these structures, total length is 2.14 mm. Carapace about 0.81 mm long; 0.57 mm wide opposite posterior border of second coxae where it is widest; 0.29 mm tall; ventral margin finely serrated; otherwise essentially typical of females of the genus (Fig. 19). Eyes: six in a compact group; outlines obscure and irregular. Viewed from above, posterior row definitely recurved and longer than anterior row in ratio of about 17 : 13; ALE conspicuously silvery, PME less so; posterior row occupies about three-fourths of width of carapace at that level; PME apparently tilted outward so that outlines are very unusual in appearance (Fig. 20). Ratio of eyes ALE : PME : PLE = nearly 6 : 5 : 5. ALE separated from one another by about their radius, and from PME and PLE by slightly more than half their radius. PME contiguous to one another and narrowly separated from PLE. Only a small amount of black pigment in ocular area; area usually

black is here reddish brown. Height of clypeus equal to slightly more than the diameter of ALE; clypeus with several stiff, black bristles and quite porrect. Chelicerae, maxillae, and lip apparently quite typical of females of the genus. Sternum: plainly lobed in fairly typical manner; longer than wide in ratio of nearly 4 : 3; widest just behind second coxae where a lobe extends laterally; with numerous incurved bristles; posterior end pointed and not quite reaching proximal end of fourth coxae, which are separated by nearly their width. Legs: 4123 in order of length; only slight difference in lengths of fourth and first legs; many hairs, bristles and several trichobothria observed but no true spines. Abdomen: typical in general of females of the genus; scuta very obscure with outlines difficult to follow; ventral scutum hardly more than a transverse line; obscurity of epigynal area prevents any clear understanding of the characters of this region. Color in alcohol: carapace light yellowish brown, darkened somewhat along lateral sides and margins; with almost no black pigment in ocular region; sternum nearly like carapace; first two pairs of legs only a little lighter than carapace; third and fourth legs somewhat more yellowish; abdomen nearly clear white throughout with many short, dark hairs.

Diagnosis. This species appears to be closely related to *Stenoonops portoricensis* Petrunkevitch and, apparently, belongs to the group containing *Stenoonops macabus* sp. nov. and several other species. The eyes appear to be unique, however, and the ventral scutum is unusually narrow.

Records. The male is unknown and there are no paratypes.

STENOONOPS INSOLITUS sp. nov.

Figures 21-26

Holotype. The male holotype is from Jamaica, W. I., St. Catherine Parish, three miles east of Old Harbour, October 21, 1957. The name of the species is a Latin adjective meaning unusual, chosen because of the unusual anatomical features.

Description. Total length 1.56 mm. Carapace 0.68 mm long; 0.48 mm wide opposite second coxae where it is widest; 0.26 mm tall; rises slightly behind PME and then is nearly level along midline to beginning of posterior declivity where there are rough granulations; surface in general finely granular, ventral margin very finely serrated but visible only when viewed from above; otherwise essentially typical of the genus (Fig. 21). Eyes: six as usual in the genus. Ratio of eyes ALE : PME : PLE = nearly 6.5 : 5.5 : 5.

Posterior row gently recurved; occupies about two-thirds of width of carapace at that level; outlines of eyes somewhat obscure. ALE separated from one another by nearly one-third of their diameter (Fig. 22); nearly contiguous to PLE and separated from PME by a broad line; PME contiguous for about one-third of their circumference and barely separated from PLE. Height of clypeus nearly equal to two-thirds of the diameter of ALE. Chelicerae and lip essentially typical of the genus. Maxillae: general form shown in Figure 23; distal end of each provided with a pair of very long and conspicuous spines not seen in any other species known to me. Sternum: longer than wide in ratio of about 3 : 2; not extended between fourth coxae, which are separated by somewhat more than their width; with marginal lobes and grooves moderately well developed; third coxae subglobose, others more elongated. Legs: 4123 in order of length; no true spines observed but spiniform bristles are numerous; trichobothria observed on tibiae and metatarsi. Palp: essential features shown in Figures 24-26. Distal end of tarsus appears divided; minor differences in the form of the distal end of the palpal tarsi have been noted among the paratypes. Abdomen: ovoid; typical of the genus in general; surface with numerous short, dark hairs; the usual scuta are present but barely visible. Color in alcohol: carapace and sternum a clear yellowish brown; legs and mouth parts somewhat lighter; abdomen almost white.

Female paratype. Total length 2.07 mm. Carapace 0.77 mm long; 0.55 mm wide opposite second coxae where it is widest; about 0.28 mm tall; otherwise essentially as in male. Eyes: ratio of eyes almost exactly as in male. Spiniform bristles on clypeus conspicuous. Posterior row of eyes occupies about two-thirds of width of carapace at that level; otherwise essentially as in male. Chelicerae, maxillae, and lip as usual in females of the genus; there are no indications of the conspicuous maxillary spines possessed by the male. Sternum: features somewhat more conspicuous than in male; slightly more than two-thirds as wide as long; bristles conspicuous on lobes and between bases of fourth coxae, which are separated by somewhat more than their width; grooves between marginal lobes quite conspicuous. Legs: 4123 in order of length; essentially as in male holotype. Abdomen: essentially as in male except for the scuta and epigynal area, which are also very poorly outlined. Color in alcohol: essentially as in male; the paired dark spots on the venter just anterior to the first pair of spinnerets, so frequently seen in species of this genus, were not seen in the holotype male but are present here as three pairs of faintly outlined

dots somewhat irregularly placed and are completely lacking in some paratypes.

Diagnosis. This species appears to belong to the group of species represented by *Stenoonops portoricensis* Petrunkevitch and *Stenoonops petrunkevitchi* Chickering, but the distinctive features of the male palp and, especially, the maxillary spines of the male definitely establish it as a new species.

Records. The described female paratype was taken with the holotype male. Two male paratypes were also taken with the holotype. Eight males and five females are also in the collection from Jamaica, W. I., as follows: St. Ann Parish near Moneague, May 20, 1956 (C. C. Hoff); St. Andrew Parish, Stony Hill, October 18, 1957; St. Catherine Parish, Guanaboa Vale, December 4, 1957; St. Catherine Parish, Evarton, November 29, 1957, and Ferry, June 19, 1954.

STENOONOPS LUCRADUS sp. nov.

Figures 27-28

Holotype. The male holotype is from St. Thomas, U. S. Virgin Islands, August 25, 1966, in the vicinity of Charlotte Amalie from hay and weed debris. The name of the species is an arbitrary combination of letters.

Description. Total length exclusive of the extended spinnerets 1.45 mm; including the spinnerets total length is about 1.55 mm. Carapace about 0.59 mm long (slightly overlapped by abdomen); nearly 0.45 mm wide opposite second coxae where it is widest; 0.24 mm tall; gently arched from PME along midline to a slightly raised portion just before beginning of steep posterior declivity; first half of declivity very steep, second half gradually descending; a tuft of hairs accentuates the top of the declivity. Eyes: six as usual in a compact group; very little difference in long axes of the three pairs of eyes but some differences in shape have been noted; posterior row slightly recurved (Fig. 27). ALE separated from one another by about two-fifths of their diameter; separated from PME by about three-tenths of their diameter and from PLE by one-fifth of their diameter. PME contiguous as usual and separated from PLE only by a line. With several bristles and a moderate amount of black pigment in ocular area. Clypeus with numerous bristles and with height about equal to the diameter of ALE. Chelicerae, maxillae, and lip obscure and difficult to observe but apparently typical of the genus and without special modifications.

Sternum: moderately convex; moderately lobed and only slightly grooved; with posterior end unusually lobed just before bases of fourth coxae, which are separated by about their width; margins with stiff, black, incurved bristles; first coxae somewhat elongated, others nearly subglobose. Legs: 4123 in order of length; no true spines observed; many hairs and bristles present. Palp: only tarsus inflated; with a very distinctive, twisted embolus (Fig. 28). Abdomen: typical of the genus; with scuta and genital area barely discernible. Color in alcohol: carapace a medium yellowish brown, lighter along median region and darker along lateral sides; with numerous black hairs; ocular region with a moderate amount of black pigment; sternum nearly the same as the carapace; legs somewhat lighter; abdomen nearly white with many short, black hairs; with no evidence of the dark spots on the venter just anterior to the spinnerets.

Female paratype. Total length 1.46 mm, exclusive of the extended spinnerets; including the spinnerets total length is 1.6 mm. Carapace about 0.61 mm long (slightly overlapped by abdomen); nearly 0.46 mm wide opposite second coxae where it is widest; about 0.28 mm tall; gently arched from just behind PME to beginning of posterior declivity nearly opposite third coxae; first half of declivity steep, lower half a very gradual descent to posterior border. Eyes: quite different in appearance from those of male; seen from above, posterior row very slightly procurved but almost straight; posterior row occupies about two-thirds of width of carapace at that level and is wider than anterior row in ratio of nearly 3 : 2. Ratio of eyes ALE : PME : PLE = nearly 5 : 5 : 4. PME tilted outward so they appear very narrow when viewed from above; their appearance is similar to that of the PME of *Stenoonops dimotus* sp. nov. from Jamaica. ALE separated from one another by a little less than their radius and separated from PME by nearly the same distance; separated from PLE by a little less than this distance. PME contiguous as usual and nearly contiguous to PLE at one point. Height of clypeus nearly equal to diameter of ALE. Chelicerae, maxillae, lip, and sternum essentially as in male. Legs: 4123 in order of length but with only small differences among them. Abdomen: almost exactly as in male with scuta hardly discernible; epigynal area without observable distinctive features. Color in alcohol: also almost exactly as in male holotype.

Diagnosis. This is another species that appears to be closely related to *Stenoonops petrunkevitchi* Chickering and *Stenoonops portoricensis* Petrunkevitch. The features of the palpal tarsus are quite distinctive and definitely serve to establish it as a new species.

Records. The described female is from St. John, U. S. Virgin Islands, July 23, 1966. One male was taken with the female.

STENOONOPS MACABUS sp. nov.

Figures 29-30

Holotype. The male holotype is from Jamaica, W. I., St. Catherine Parish, three miles east of May Pen, November 22, 1957. The name of the species is an arbitrary combination of letters.

Description. Total length 1.78 mm. Carapace 0.66 mm long; 0.5 mm wide opposite second coxae where it is widest; 0.22 mm tall; slightly raised just behind PME and then nearly level along midline to beginning of steep posterior declivity; with no median thoracic groove or pit; surface very finely granulate and corrugated; quite typical of the genus in general. Eyes: six in two rows as usual in the genus. Ratio of eyes ALE : PME : PLE = nearly 11 : 9 : 7 (outlines somewhat obscure). Posterior row occupies about two-thirds of width of carapace at that level and is moderately recurved, viewed from above (Fig. 29). ALE separated from one another by about their radius, from PME by about half their radius and from PLE by about one-fifth of their diameter. PME contiguous for about one-fourth of their circumference and nearly tangent at one point to PLE. Posterior row of eyes wider than anterior row in ratio of about 6 : 5. The clypeus bears a row of long, stiff bristles; height of clypeus nearly equal to three-fourths of long axis of ALE. Chelicerae as usual in the genus. Maxillae long, slender, slightly convergent. Lip essentially typical of the genus; reaches nearly to middle of maxillae. Sternum: essentially typical of the genus; with lobes and grooves along margins moderately well developed; bluntly terminated shortly before bases of fourth coxae which are separated by a little less than their width. Legs: 4123 in order of length; spines are lacking as usual; otherwise typical of the genus. Palp: all segments except tarsus simple and without special modifications; tarsus inflated and extended as a long, curved embolus (Fig. 30) not seen elsewhere in the genus. Abdomen: 1.1 mm long; 0.59 mm wide; ovoid in general; spinnerets as usual in the genus; scuta are very poorly outlined. Color in alcohol: carapace with the usual yellowish brown color; sternum and legs somewhat lighter; abdomen very light yellowish white with numerous, small, irregular, white, glistening flecks.

Diagnosis. This species also appears to belong to the group of species represented by *Stenoonops portoricensis* Petrunkevitch, but the palp is very distinctive and plainly establishes it as a new species.

Records. The female is unknown and there are no male para-types.

STENOONOPS PETRUNKEVITCHI Chickering
Figures 31-33

Stenoonops petrunkevitchi Chickering, 1951: 241, figs. 29-30. The male holotype from Barro Colorado Island, Panama Canal Zone, July, 1938, is in the Museum of Comparative Zoology.

Female. There is no certainty that the female described here belongs in this species. It seems reasonable, however, to make this assumption because of the close resemblance to the male and because no other species have been reported from this region as far as I have been able to learn. Total length 1.37 mm. Carapace 0.61 mm long; 0.44 mm wide opposite posterior borders of second coxae where it is widest; 0.20 mm tall; somewhat raised just behind PME and then level along midline to beginning of fairly steep posterior declivity opposite anterior border of third coxae; surface finely granular; dorsal surface with a double row of dark hairs all directed toward the midline (Figs. 31-33). Eyes: six in a compact group; apparently very near to those of male but outlines are indistinct. Chelicerae essentially as in male. Maxillae: nearly parallel; somewhat widened distally; about twice as long as lip. Lip: about as wide distally as at base; sternal suture appears nearly straight. Sternum: essentially as in male; third and fourth coxae nearly globose; first and second somewhat elongated. Legs: essentially as in male. Abdomen: essentially as in male; scuta barely visible; epigynal area without distinctive features.

Records. The described female is from Barro Colorado Island, Panama Canal Zone, August 16, 1954. Since the male holotype was collected in July, 1938, the following specimens have been added to the collection: two males taken on Barro Colorado Island, February 8, 1958; two males taken in the Panama Canal Zone Forest Preserve, January 6, 1958. One male collected by Dr. A. M. Nadler on Barro Colorado Island, April, 1953, is also referred to this species. Apparently this species is not abundant in regions of Panama where I have collected. What is probably an immature female from the Canal Zone Forest Preserve, July 23, 1950, may represent a new species.

STENOONOPS HOFFI sp. nov.
Figures 34-42

Holotype. The male holotype is from Jamaica, W. I., St. Thomas Parish, Morant Point, May 6, 1956. Collected by Dr. C. C. Hoff

from axils of thatch palm. The species is named after the collector.

Description. Total length 1.14 mm including extended spinnerets; excluding the spinnerets, total length is 1.06 mm. Carapace 0.51 mm long; 0.38 mm wide opposite second coxae where it is widest; 0.18 mm tall; sharply narrowed opposite PLE; gently arched along midline from PME to beginning of steep posterior declivity; broad median region from PME to beginning of posterior declivity smooth and shining; lateral and posterior surfaces irregularly granular; with ventral margin finely serrated; few hairs or bristles observed except in ocular region where there are several stiff bristles (Figs. 34-35). Eyes: six as usual in a compact group; viewed from above, posterior row moderately recurved and wider than anterior row in ratio of about 5 : 4; posterior row occupies nearly the entire width of carapace at that level. Ratio of ALE : PME : PLE = 6 : 5 : 4.5. ALE bright silvery; separated from one another by nearly one-fourth of their long axis; only slightly oval; separated from PME by about one-sixth of their long axis and from PLE by a line; with considerable black pigment in ocular area. Clypeus somewhat porrect; with several spiniform bristles; height equal to about three-fourths of the long axis of ALE (Fig. 36). Chelicerae: vertical; parallel; apparently without special modifications. Maxillae: long, slender, convergent and touching beyond lip. Lip: much wider than long; otherwise typical of the genus. Sternum: quite convex; surface smooth through narrow median region but elsewhere irregularly granulate; quite plainly lobed and grooved along lateral margins; longer than wide in ratio of about 5 : 4; widest opposite interval between second and third coxae but nearly as wide between first and second coxae; third and fourth coxae subglobose, others somewhat elongated; posterior end bluntly terminated but apparently slightly bilobed; extended between bases of fourth coxae which are separated by nearly 1.5 times their width. Legs: 4123 in order of length; no true spines observed. Palp: tarsus inflated as usual with terminal features difficult to observe but apparently distinctive (Figs. 37-40); femur, patella, and tibia simple and without special modifications. Abdomen: regularly ovoid; spinnerets somewhat extended beyond tip of abdomen; about two-thirds as wide as long; epigastric and narrow ventral scuta moderately well outlined (Fig. 41). Color in alcohol: carapace brown with irregular streaks on lateral and posterior surfaces caused by the granulations previously referred to; sternum somewhat lighter brown; legs and mouth parts yellowish with variations; coxae darker; abdomen yellowish and with considerable iridescence; scuta somewhat darker.

Female paratype. Total length, exclusive of the slightly extended spinnerets 1.21 mm. Carapace 0.54 mm long; 0.4 mm wide; nearly 0.19 mm tall. Otherwise the briefly described female paratype appears to be essentially almost identical to the male in nearly all features. Even the abdominal scuta and epigynal area differ only slightly from corresponding regions of the male (Fig. 42).

Diagnosis. This species seems to be closely related to *Stenoonops minutus* Chamberlin and Ivie, now known from Florida and South Bimini, Bahama Islands. It differs from that species in respect to color pattern and the minute and obscure features of the male palpal tarsus.

Records. The described female paratype is from Jamaica, W. I., St. Thomas Parish, Morant Point, Oct. 14, 1957; taken from palm debris on the ground. Two male paratypes were taken with the holotype. Two female paratypes are in the collection from Trellawney Parish, fourteen miles east of Falmouth, May 15, 1956 (C. C. Hoff), and one additional female is from St. Catherine Parish, Guanaboa Vale, December 4, 1957.

STENOONOPS MINUTUS Chamberlain and Ivie

Stenoonops minutus Chamberlin and Ivie, 1935: 8, figs. 1-2, 14. The male holotype from Tampa, Florida, U. S. A., is now on semipermanent loan from the Museum of the University of Utah in the American Museum of Natural History, New York City, N. Y., examined. Roewer, 1942: 280; Bonnet, 1958: 4156; Chickering, 1969 (in press).

Several specimens of both sexes on loan from the American Museum of Natural History have been assigned to this species. All of these were collected on South Bimini, Bahama Islands, B. W. I., as follows: May, 1951 (W. J. Gertsch and M. A. Cazier); June, 1951 (M. A. Cazier and C. and P. Vaurie); July, 1951 (C. and P. Vaurie); April, 1952 (E. Mayr); December, 1952 and March, 1953 (A. M. Nadler). For some time these specimens were regarded as representing a new species and were described as such. Following a comparison with specimens of *Stenoonops minutus* Chamberlin and Ivie from Florida, they have now been assigned to that species. Minor differences have been noted but they are now regarded as well within the range of normal variation within a species.

STENOONOPS PHONETUS sp. nov.

Figures 43-46

Holotype. The male holotype is from Puerto Rico, Cidra, Treasure Island, February 26-27, 1955; collected by Dr. A. M. Nadler.

It will be deposited in the American Museum of Natural History, New York, N. Y. The name of the species is an arbitrary combination of letters.

Description. Total length 1.19 mm. Carapace 0.55 mm long; nearly 0.39 mm wide opposite second coxae where it is widest; nearly 0.20 mm tall; raised considerably just behind PME and then nearly level to beginning of steep posterior declivity opposite anterior borders of third coxae (Figs. 43-44); without a median thoracic groove or pit; central regions smooth with few hairs; lateral and posterior surfaces irregularly granulate; ventral margins plainly serrated. Eyes: six in two rows as usual; in a compact group nearly as broad as the carapace at that level; posterior row gently recurved and wider than anterior row in ratio of nearly 7 : 6. Ratio of eyes ALE : PME : PLE = 12 : 11 : 10. PME considerably longer than wide; some irregularities in outlines of eyes noted. ALE separated from one another by nearly one-third of their diameter; separated from PME only by a line and contiguous to PLE; PME contiguous for nearly one-third of their circumference and contiguous to PLE for only a short distance. Clypeus considerably porrect; height equal to nearly two-thirds of the long diameter of ALE; with several quite long, slender spines. Chelicerae, maxillae, and lip quite typical of the genus as far as observed. Sternum: quite conspicuously lobed and grooved; longer than wide in ratio of nearly 4 : 3; widest just behind second coxae where a lobe extends laterally; posterior end terminates just opposite bases of fourth coxae which are separated by somewhat more than their width; surface very finely granulate. Legs: 41=23 in order of length; true spines are lacking as usual. Palp: typical of several species in the genus with features very inconspicuous (Fig. 45); a jet of semen is very conspicuous, however. Abdomen: quite typical of the genus; with epigastric and ventral scuta fairly well outlined and essentially as in female; with internal sacs just anterior to spinnerets on the venter showing through fairly clearly. Color in alcohol: carapace a medium brown with irregular darker patches along lateral and posterior surfaces caused by granulations; only a moderate amount of black pigment in ocular area; sternum a somewhat lighter yellowish brown; legs and mouth parts yellowish with little variation; palpal tarsus white.

Female paratype. Total length 1.29 mm. Carapace nearly 0.55 mm long; nearly 0.40 mm wide just behind second coxae where it is widest; general shape and other features essentially as in male; with ventral border serrated as in male. Eyes: essentially as in male but occupying a little less of the width of the carapace; ALE separated

a little further from PME than in the male; otherwise spaced essentially as in that sex; clypeus equally porrect and fully as tall as in male. Chelicerae: very finely rugulose in front; otherwise essentially as in male. Maxillae and lip also essentially as in male. Sternum: longer than wide in ratio of about 17 : 14; somewhat less conspicuously grooved and lobed than in male; extends to just opposite bases of fourth coxae which are separated by nearly five-fourths of their width. Legs essentially as in male. Abdomen: essentially typical of females of the genus; epigastric and ventral scuta moderately well outlined (Fig. 46); paired dark sacs anterior to spinnerets fairly well outlined. Color in alcohol essentially as in male.

Diagnosis. This species seems to be closely related to *Stenoonops minutus* Chamberlin and Ivie now known from Florida and South Bimini, Bahama Islands, and for a time was included with that species. A careful comparison, however, seems to show that it differs from that species significantly with respect to the following features: relative position of the eyes; appearance of the clypeus; shape of the carapace; and, especially, in respect to the conspicuously serrated ventral border of the carapace (Figs. 43-44).

Records. The described female paratype is from Mayagüez, Puerto Rico, January 19, 1955. In addition to the holotype and the described female paratype, I have had the following specimens for study: one male taken with the described female paratype; one female from Rio Piedras, March 14, 1959; two males from Rio Piedras, Humacao Co., March 2, 1955. All of these are from Puerto Rico and all were collected by Dr. A. M. Nadler. All specimens mentioned here will be deposited in the American Museum of Natural History, New York, N. Y.

STENOONOPS SCABRICULUS Simon

Figures 47-48

Stenoonops scabriculus Simon, 1891: 565. The holotype male from St. Vincent, B. W. I., is in the British Museum (Natural History), examined. Simon, 1892: 447; 1893: 296; Petrunkevitch, 1911: 129; 1928: 87; Roewer, 1942: 280; Bonnet, 1958: 4156.

The male from St. Vincent, B. W. I., is the type species of the genus. The original description was very briefly given in Latin and was not accompanied by figures. A male, believed to be the holotype, was loaned for study from the British Museum (Natural History). The date accompanying this species, however, was given as 94-10-17.

Male holotype. Total length 1.39 mm, exclusive of the somewhat extended spinnerets and chelicerae; including these parts total length is 1.51 mm. Carapace 0.65 mm long; 0.43 mm wide; 0.2 mm tall; slightly arched along midline from PME to beginning of moderately steep posterior declivity; surface finely granular; with no indication of a median thoracic groove or pit; ventral margin finely serrated. Eyes: posterior row occupies nearly three-fifths of width of carapace at that level; only slightly wider than anterior row; moderately recurved (Fig. 47). Ratio of eyes ALE : PME : PLE = 6 : 5.75 : 5. ALE separated from one another by about one-third of their long axis; barely separated from PME and PLE. PME contiguous to one another for one-third of their circumference; separated from PLE by a line. Height of clypeus equal to slightly more than one-half the long axis of ALE. Chelicerae: nearly vertical; slightly extended; essentially parallel; with no special modifications observed. Maxillae: probably divided distally but fragility of specimen prevents close examination. Lip: hidden by numerous hairs but apparently without special modifications. Sternum: moderately lobed and grooved; surface finely granular; longer than wide in ratio of about 9 : 7; widest opposite interval between second and third coxae where well-developed lobes extend laterally; posterior end narrowed and bluntly rounded just opposite bases of fourth coxae which are separated by a little more than five-fourths of their width. Legs: 4123 in order of length; with few bristles and with no spines observed. Palp: femur of moderate length, both patella and tibia short; essential features of the tarsus shown in Figure 48; tarsus with numerous broad hairs on the cymbium and the usual dorsal pad of short, fine hairs. Abdomen: ovoid; 0.81 mm long; 0.5 mm wide a little behind the middle; spinnerets as usual in the genus; epigastric and ventral scuta hardly visible. Color in alcohol: carapace and sternum yellowish brown; only a small amount of black pigment in ocular area; legs and mouth parts lighter than carapace and sternum with variations; abdomen very light yellowish.

Records. Simon reported this species from Venezuela as well as from St. Vincent, B. W. I. I failed to collect the species during my visit to this island in 1966 and, as far as I have been able to determine, it has not been reported since the holotype was taken.

STENOONOPS HALATUS sp. nov.

Figures 49-52

Holotype. The female holotype is from Antigua, B. W. I., Fig Tree Hill, near Old Road, August, 1967. Collected by Mrs. Elsa

Sabath. The name of the species is an arbitrary combination of letters.

Description. Total length 1.62 mm exclusive of the slightly extended spinnerets (Fig. 49); including the spinnerets total length is 1.67 mm. Carapace about 0.61 mm long; about 0.5 mm wide opposite posterior border of second coxae where it is widest; about 0.27 mm tall; raised slightly just behind PME and continues to rise somewhat to beginning of steep posterior declivity (Fig. 50) nearly opposite third coxae; surface finely granular and with few hairs. Eyes: six as usual in a compact group; posterior row moderately recurved and occupying slightly more than three-fourths of width of carapace at that level and wider than anterior row in ratio of about 6 : 5. Ratio of eyes ALE : PME : PLE = about 8 : 7 : 6.5. ALE separated from one another by somewhat less than one-half their radius; barely separated from PLE and separated from PME by only a line. PME contiguous for about one-fourth of their circumference and nearly contiguous to PLE for only a short distance; with a moderate amount of black pigment in ocular area. Clypeus quite porrect and with height nearly equal to radius of ALE; with several spiniform bristles (Fig. 51). Chelicerae, maxillae, and lip essentially typical of females of the genus. Sternum: obscured by curled, fragile legs; apparently quite typical of the genus; longer than wide in ratio of about 19 : 15; quite distinctly lobed and grooved; slightly bilobed at posterior end, which is just opposite the middle of the fourth coxae, which are separated by slightly less than 1.5 times their width. Legs: 42=13 in order of length; no true spines observed; all legs moderately long and slender. Palp with many fine hairs and bristles. Abdomen: ovoid; longer than wide in ratio of nearly 4 : 3; epigastric and ventral scuta quite clear and typical of the genus (Fig. 52). Spinnerets also quite typical of the genus. Color in alcohol: carapace a light yellowish brown with somewhat darker areas corresponding to uneven distribution of granulations; sternum nearly like carapace; legs and mouth parts yellowish with some variations; abdomen nearly white in general, with faint reticulations; scuta light yellowish brown with variations; just anterior to the base of the anterior spinnerets a pair of darker, irregular spots occur as usual in the genus; there are also many short, black hairs on this part of the body.

Diagnosis. This species seems to be most closely related to *Stenoonops reductus* (Bryant) but it differs considerably from that species with respect to the shape of the carapace, features of the sternum, and characteristics of the scuta and epigynal area.

Records. The male is unknown and there is no female paratype.

STENOONOPS REDUCTUS (Bryant)

Figures 53-58

Scaphioides reducta Bryant, 1942: 327, pl. 1, figs. 6, 8. The female holotype from St. Croix, U. S. Virgin Islands, is in the Museum of Comparative Zoology, Harvard University, Cambridge, Mass., examined.

Miss Bryant apparently regarded this species as a close relative of the species placed in the genus *Scaphiella* Simon and erected a new genus for it. I am obliged to consider the species as belonging to the genus *Stenoonops* Simon and am placing it here on the basis of the appearance of the male palp, the ventral scuta, eyes, sternum, and general form of the whole body. A male from St. Croix, U. S. V. I., has been selected for rather detailed description as given below.

Male. Total length 1.56 mm exclusive of the somewhat extended spinnerets; including the spinnerets total length is 1.61 mm. Carapace 0.64 mm long; 0.5 mm wide opposite second coxae where it is widest; 0.26 mm tall; gently arched from PME to beginning of steep posterior declivity; surface notably granular which gives the ventral margin a finely serrated appearance; with no evidence of a median fovea or groove (Figs. 53-54). Eyes: six as usual in a compact group; posterior row gently recurved and occupying fully two-thirds of width of carapace at level of posterior border of PLE. Ratio of eyes ALE : PME : PLE = 12 : 11 : 10. ALE narrowly separated from one another and separated from PME and PLE by about one-seventh of their long axis. PME contiguous for nearly one-third of their circumference and contiguous to PLE for a short distance. Clypeus quite porrect; height of clypeus nearly equal to long axis of ALE. Chelicerae, maxillae, and lip essentially as described for the holotype female; with no special modifications observed. Sternum: convex; only a little longer than wide just behind second coxae where it is widest; considerably narrowed in front; surface granular with sharply accentuated marginal lobes and grooves; a rounded lobe at posterior end between bases of fourth coxae, which are separated by about seven-fifths of their width; third and fourth coxae subglobose; first and second coxae slightly more elongated. Legs: 41=23 in order of length; numerous short hairs on all legs but no spines observed. Palp: femur of moderate length, about twice as long as patella; both patella and tibia short; tarsus with distinctive features (Figs. 55-56). Considerable variation has been noted among the available males in respect to length of terminal palpal tarsal structures.

Abdomen: ovoid in general; 0.88 mm long exclusive of the somewhat extended spinnerets; 0.61 mm wide near middle; epigastric and narrow ventral scuta are well developed (Fig. 57) and chitinized essentially as described for the female holotype except that both scuta are closely pressed together. Color in alcohol: carapace a rich medium brown somewhat lighter along median region and with a moderate amount of black pigment in ocular area; sternum nearly like carapace; mouth parts and legs yellowish with variations; abdomen nearly white with scuta clearly delineated and colored nearly like sternum. Epigynal area of female somewhat distinctive (Fig. 58).

Records. The described male is from St. Croix, U. S. Virgin Islands, Frederiksted, March 23, 1964. Numerous specimens of both sexes are in the collection from several localities in the vicinity of Frederiksted and King's Hill, March, 1964, and September, 1966. Two males and a female were taken on St. John, U. S. Virgin Islands, March, 1964.

STENOONOPS NOCTUCUS sp. nov.

Figures 59-63

Holotype. The male holotype is from St. Thomas, U. S. Virgin Islands, taken from hay and weed debris on roadside in outskirts of Charlotte Amalie, February 9, 1964. The name of the species is an arbitrary combination of letters.

Description. Total length exclusive of the slightly extended chelicerae and spinnerets 1.19 mm; including these structures total length is 1.28 mm. Carapace 0.5 mm long; 0.38 mm wide just behind second coxae where it is widest; 0.14 mm tall (slightly lower than usual); nearly level along midline from PME to beginning of moderately steep posterior declivity; surface smooth and with no evidence of a median thoracic groove or pit. Eyes: unusual in the genus; six in a compact group; posterior row slightly procurved and occupying nearly three-fifths of width of carapace at that level. Ratio of eyes ALE : PME : PLE = nearly 4.5 : 5 : 4. Outline of eyes somewhat irregular and difficult to observe especially with respect to PME (long axes used for measurements). ALE separated from one another by nearly three-eighths of their long axis; separated from PME by about three-sixteenths of their long axis and from PLE by only a line. PME unusually elongated (Fig. 59) and contiguous for nearly their long axis and contiguous to PLE for about one-fourth of the long axis of the latter; some asymmetry of eyes noted. Clypeus very narrow; apparently its

height is not more than one-fourth of the long axis of ALE. Chelicerae: slender, vertical; of moderate length. Maxillae: slightly convergent; about twice as long as lip, which is about as long as wide at base. Sternum: moderately raised and then nearly flat; longer than wide in ratio of about 7 : 6; widest between second and third coxae where a lobe extends laterally and bears a cluster of stiff, curved bristles (Fig. 60); not otherwise conspicuously lobed or grooved; surface smooth with numerous short hairs or bristles generally curved inward; bluntly rounded posterior end extends just to base of fourth coxae, which are separated by about five-fourths of their width; third coxae globose, fourth subglobose, others somewhat elongated. Legs: 4123 in order of length; with many stiff hairs and spiniform bristles but no true spines. Palp: femur somewhat elongated; patella and tibia short; tarsus inflated and with very obscure but quite distinctive features (Figs. 61-63). Abdomen: elongate ovoid; spinnerets of moderate length; epigastric and ventral scuta only weakly indicated; with many short, dark, stiff hairs. Color in alcohol: carapace and sternum a light yellowish brown; legs and mouth parts somewhat lighter; abdomen with several irregular, purplish spots of different sizes against a nearly white dorsal background; venter nearly white with a pair of yellowish spots just anterior to the spinnerets.

Female paratype. Total length 1.34 mm. Carapace 0.55 mm long; 0.41 mm wide; 0.15 mm tall. Eyes essentially as in male. Chelicerae, maxillae, and lip also essentially as in male with minor differences considered unnoteworthy. Palp with many stiff, conspicuous bristles. Sternum essentially as in male with the conspicuous lateral lobes extended between second and third coxae. Legs also essentially as in male. Abdomen: with epigastric and ventral scuta faintly visible; epigynal area indistinguishable. Color in alcohol: cephalothorax and appendages as in male; abdomen with the purplish spots somewhat more clearly shown than in male; in the anterior third of the dorsum are two pairs of somewhat irregular purplish spots and in the posterior third of the dorsum there is a pair of larger purplish spots; on the venter just anterior to the spinnerets there is a pair of somewhat oval, brownish spots; elsewhere the abdomen is a very light yellowish.

Diagnosis. This species appears to exhibit many of the usual generic characters of *Stenoonops* but does not seem to be closely related to any other species in the genus as I have come to know it. The eyes, features of the sternum, and color pattern all seem to indicate that this species represents a new group to add to the

genus. In the past it might very well have been assigned to a new genus by some taxonomists.

Records. The described female paratype, together with two additional females, were all taken from hay and weed litter on the roadside close to the spot that yielded the male holotype on February 9, 1964. One female was taken on St. John, U. S. Virgin Islands, Cruz Bay, March 1, 1964.

STENOONOPS PADISCUS sp. nov.

Figures 64-68

Holotype. The male holotype is from Jamaica, W. I., St. Catherine, three miles east of May Pen, November 22, 1957. The name of the species is an arbitrary combination of letters.

Description. Total length about 1.25 mm (the holotype is very fragile and somewhat dismembered) exclusive of the extended spinnerets and chelicerae; including these structures, total length is about 1.36 mm. Carapace 0.52 mm long; 0.37 mm wide just behind second coxae where it is widest; about 0.19 mm tall; ventral margin somewhat irregular but not definitely serrated as in some species; continues from PME nearly level to beginning of very gradually descending posterior declivity; surface very finely granulate; hairs along medial region convergent toward midline. Eyes: six in a compact group; posterior row occupies about six-elevenths of width of carapace at that level; posterior row somewhat procurved, measured by posterior borders and viewed from above. Ratio of eyes ALE : PME : PLE = nearly 5 : 5 : 4 (long diameters used for measurements). PME much narrowed (Fig. 64); only about half as wide as long. ALE separated from one another by about three-tenths of their diameter; barely separated from PLE and separated from PME by less than one-fifth of their diameter. PME contiguous for fully one-third of their circumference; barely separated from PLE. Posterior row of eyes only a little wider than anterior row. Height of clypeus somewhat less than radius of ALE. Chelicerae, maxillae, and lip apparently typical of the genus. Sternum: widest near middle where a lateral lobe extends between second and third coxae; only longer than wide at this point in ratio of about 6 : 5; with practically no marginal grooves; with numerous bristles especially along margins; sternal suture at base of lip nearly straight; posterior end extended between bases of fourth coxae which are separated by nearly five-fourths of their width. Legs: 4123 in order of length; no spines observed; trichobothria

observed but exact number and placement not determined. Palp: only tarsus with special modifications (Figs. 65-67). Abdomen: essentially typical of the genus except that the scuta and genital region are very obscurely outlined and not suitable for illustration. Color in alcohol: carapace, sternum, legs, and mouth parts a pale yellowish with variations; abdomen nearly white with variations.

Female paratype. Although no females were taken with either male assigned to this species, it seems reasonable to assume that this specimen represents the female of the species because of its close resemblance to the holotype. Total length 1.43 mm exclusive of the somewhat extended chelicerae and spinnerets; including these structures, total length is about 1.54 mm. Carapace about 0.57 mm long; 0.42 mm wide opposite posterior border of second coxae where it is widest; nearly 0.21 mm tall; slightly arched along midline from PME to beginning of moderately steep posterior declivity nearly opposite interval between second and third coxae; no serrations observed along ventral border. Eyes: essentially as shown in Figure 68; very similar to those of male; all eyes quite silvery. Chelicerae, maxillae, and lip essentially as usual in the genus. Sternum: longer than wide in ratio of about 4 : 3; widest opposite interval between second and third coxae where a conspicuous lobe extends laterally as in male; moderately lobed but without grooves; with many incurved bristles especially along margins; sternal suture straight; posterior end extended between fourth coxae which are separated by about 1.2 times their width. Legs: essentially as in male. Abdomen: ovoid as usual; generally typical of the genus except that the scuta and epigynal area are barely discernible and without distinctive features. Color in alcohol: essentially as in male except that the abdomen is yellowish white with a faint darker reticulation more evident on dorsum than on venter.

Diagnosis. In my judgment, this species is another somewhat aberrant member of the genus, closely related to *Stenoonops noctucus* sp. nov. but somewhat remotely related to other species that I have had an opportunity to study.

Records. The described female paratype is from Jamaica, W. I., St. Thomas, Morant Point, Maumee Bay, October 14, 1957. In addition to these two specimens, my collection contains the following specimens, all from Jamaica, W. I.: one male from St. Andrew Parish, Newcastle Road, five miles from Kingston, May 10, 1950 (C. C. Hoff); three females from St. Catherine Parish, two miles east of Ferry, May 17, 1956 (C. C. Hoff); St. Andrew Parish, Ferry, one mile west of Red Hills Road, Oct. 6, 1957; St. Thomas Parish, Morant Point, May 6, 1956 (C. C. Hoff).

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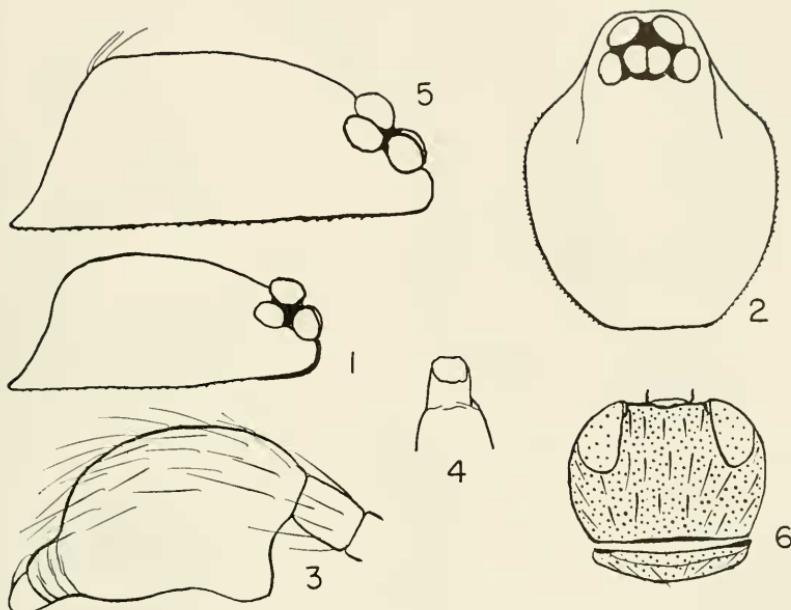
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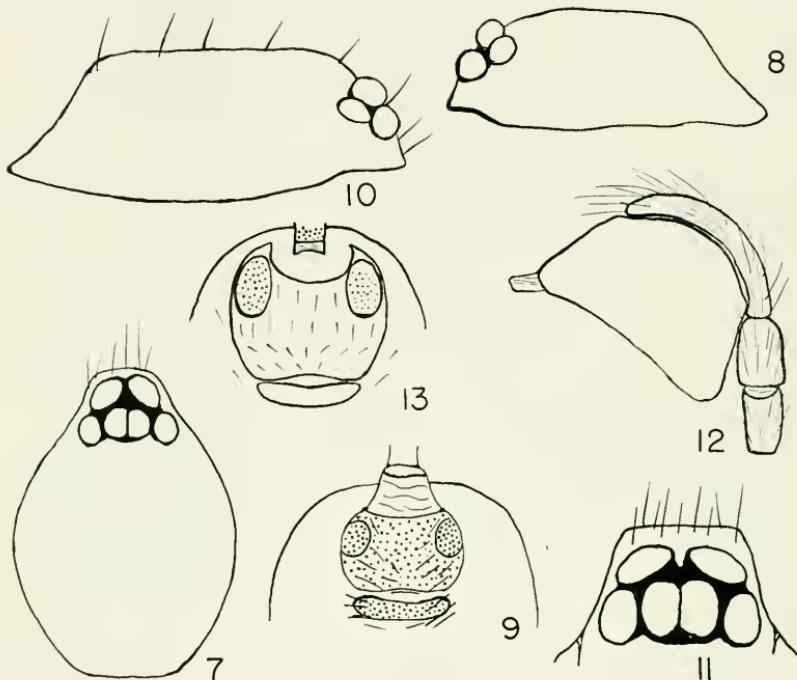
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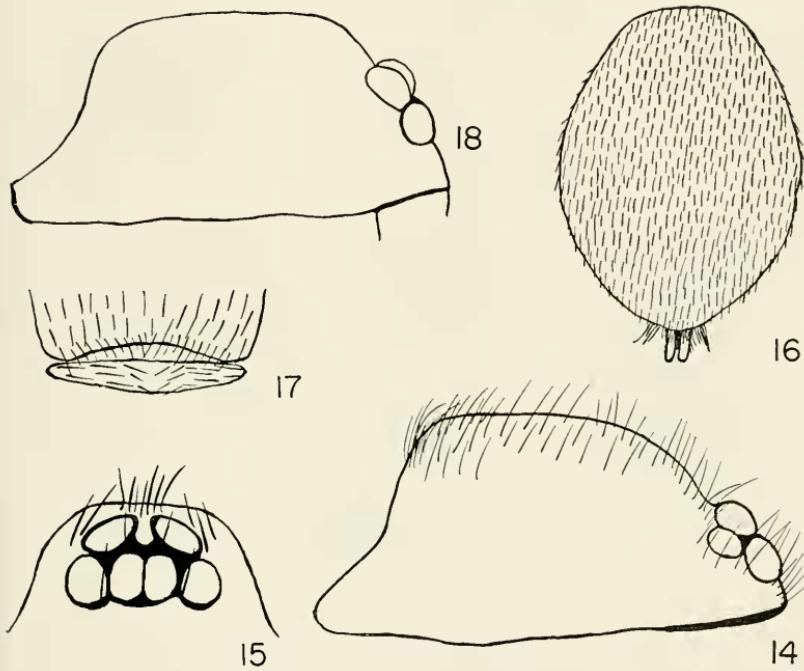
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<i>econotus</i>	7	<i>padiscus</i>	37
<i>halatus</i>	30	<i>petrunkevitchi</i>	21
<i>hoffi</i>	22	<i>phonetus</i>	25
<i>insolitus</i>	14	<i>portoricensis</i>	10
<i>lucradus</i>	16	<i>reductus</i>	32
<i>macabus</i>	19	<i>scabriculus</i>	28
<i>minutus</i>	24		



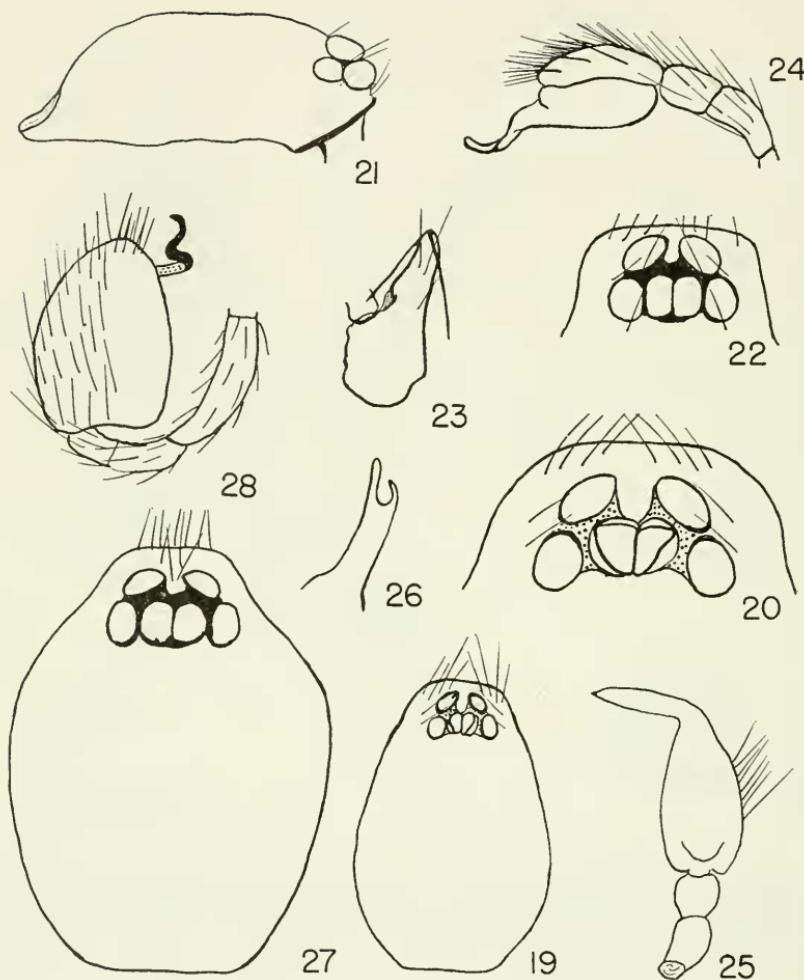
Figures 1-6. *Stenoonops cletus* sp. nov. Fig. 1, Carapace of male; right lateral view. Fig. 2, Carapace of male from above. Fig. 3, Left palpal tibia and tarsus; retrolateral view. Fig. 4, Distal end of palpal tarsus; nearly ventral view. Fig. 5, Carapace of female; right lateral view. Fig. 6, Epigastric and ventral scuta of female from below.



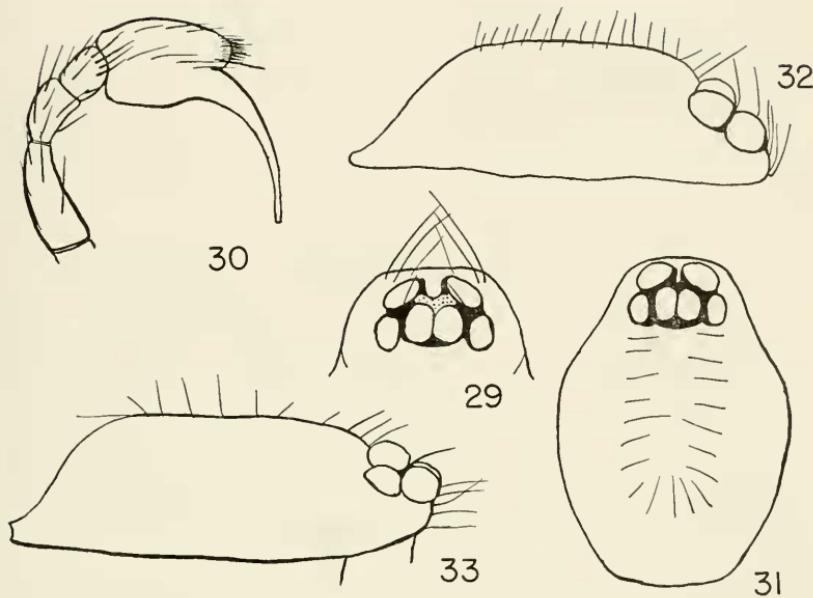
Figs. 7-9. *Stenoonops econotus* sp. nov. Figs. 7-8, Carapace of female holotype from above and in left lateral view, respectively. Fig. 9, Abdominal scuta and epigynal area of holotype from below. Figs. 10-13. *Stenoonops nitens* Bryant. Fig. 10, Carapace of male; right lateral view. Fig. 11, Eyes of male from above. Fig. 12, Left palp of male; retrolateral view. Fig. 13, Scuta and epigynal area from below.



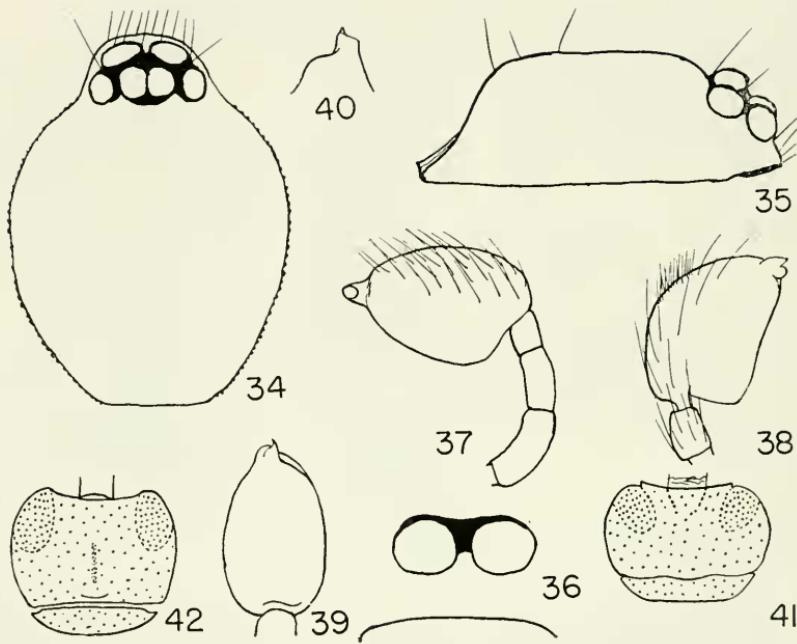
Figs. 14-18. *Stenoonops portoricensis* Petrunkevitch. Fig. 14, Carapace of female; right lateral side. Fig. 15, Eyes of female from above. Fig. 16, Abdomen of female from above. Fig. 17, Epigynal area of female. Fig. 18, Carapace of male holotype; right lateral side.



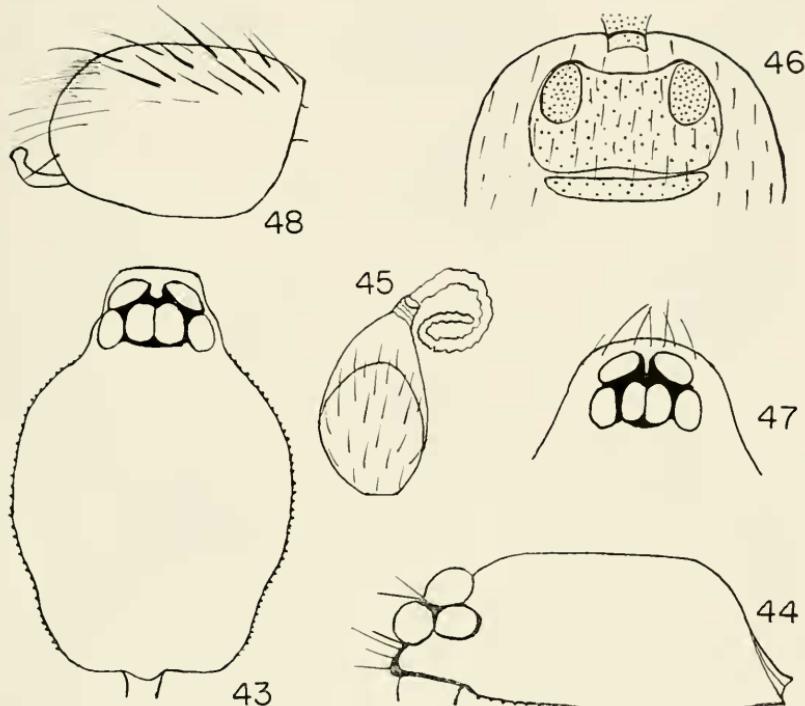
Figs. 19-20. *Stenoonops dimotus* sp. nov. Fig. 19, Carapace of holotype from above. Fig. 20, Eyes of holotype from above. Figs. 21-26. *Stenoonops insolitus* sp. nov. Fig. 21, Carapace of male holotype right lateral view. Fig. 22, Eyes of holotype from above. Fig. 23, Right maxilla from dissected male paratype. Figs. 24-25, Left palp of holotype; retrolateral and nearly ventral views, respectively. Fig. 26, Distal end of palpal tarsus; more enlarged and turned to show division. Figs. 27-28. *Stenoonops lucradus* sp. nov. Fig. 27, Carapace of holotype male from above. Fig. 28, Left palp of male holotype; prolateral view.



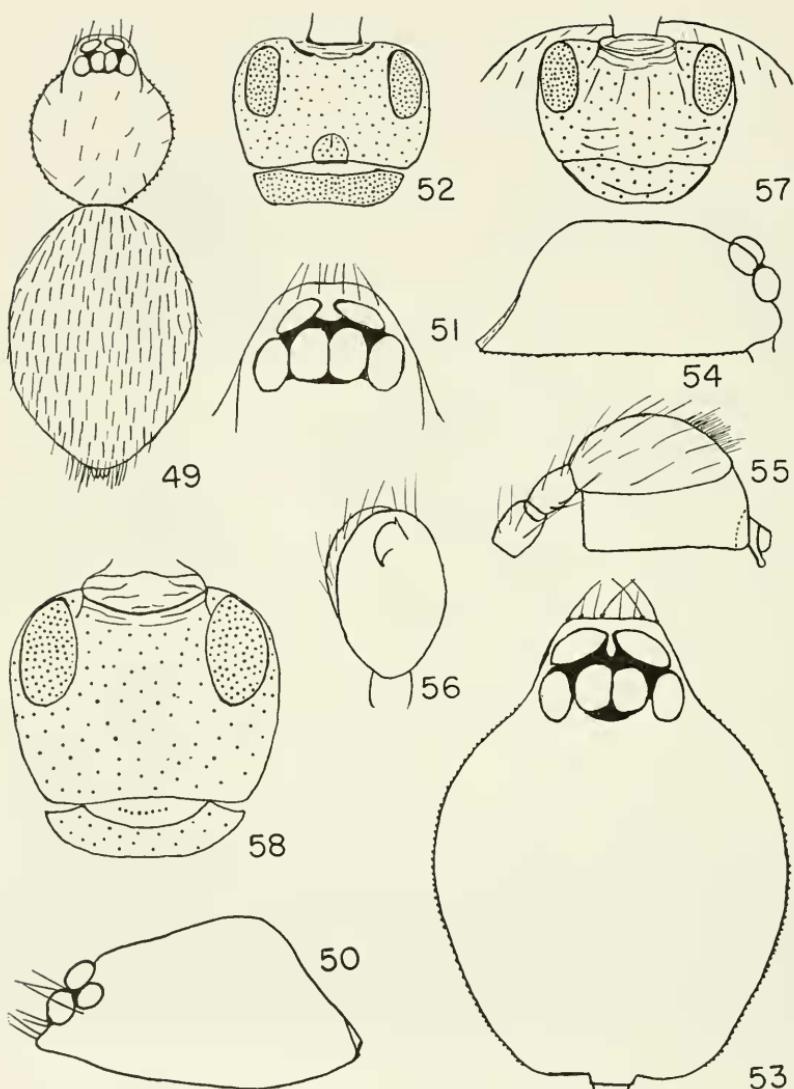
Figs. 29-30. *Stenoonops macabus* sp. nov. Fig. 29, Eyes of male holotype from above. Fig. 30, Left palp of male holotype; prolateral view. Figs. 31-33. *Stenoonops petrunkevitchi* Chickering. Figs. 31-32, Carapace of female from above and right lateral side, respectively. Fig. 33, Carapace of male; right lateral side.



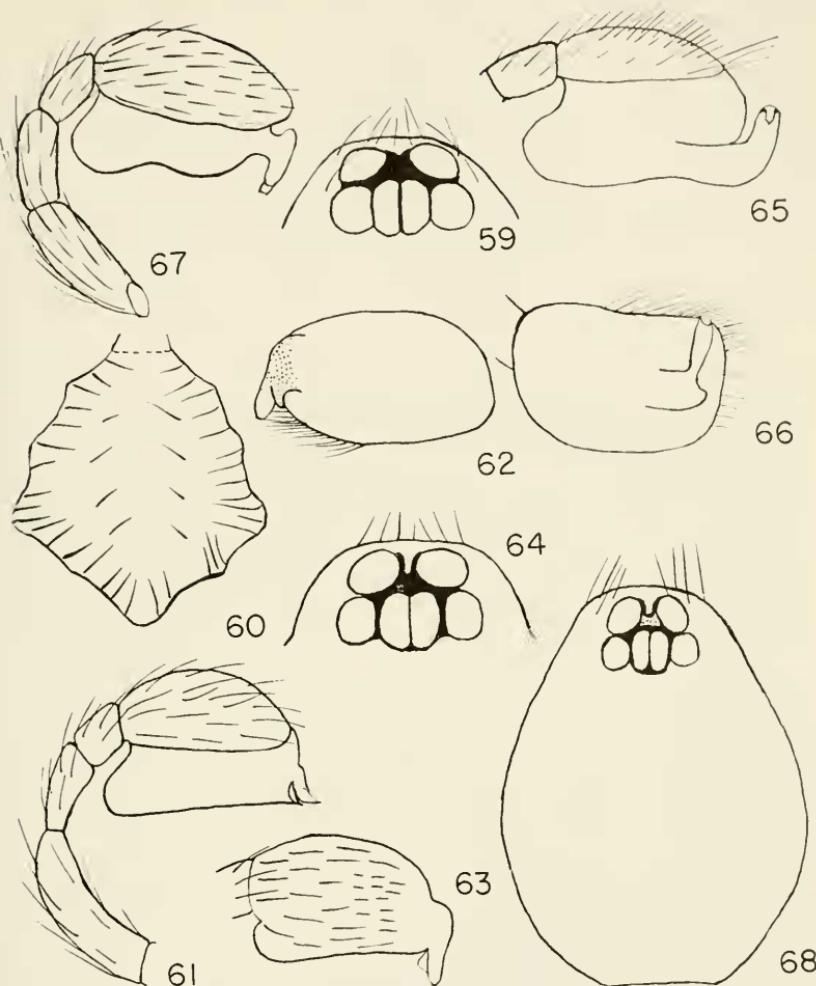
Figs. 34-42. *Stenoonops hoffi* sp. nov. Figs. 34-35, Carapace of holotype male from above and right lateral view, respectively. Fig. 36, ALE of holotype from in front. Fig. 37, Left palp of holotype; retrolateral view. Figs. 38-39, Left palp of paratype male; prolateral and nearly ventral views, respectively. Fig. 40, Distal end of left palpal tarsus of paratype male; nearly dorsal view. Fig. 41, Abdominal scuta of paratype male from below. Fig. 42, Abdominal scuta of described female paratype from below.



Figures 43-46. *Stenoonops phonetus* sp. nov. Figs. 43-44, Carapace of male holotype from above and from left lateral side, respectively. Fig. 45, Left palpal tarsus; nearly dorsal view. Fig. 46, Epigastric and ventral scuta of female from below. Figs. 47-48. *Stenoonops scabriculus* Simon. Fig. 47, Eyes of holotype from above. Fig. 48, Left male palpal tarsus; retro-lateral view.



Figs. 49-52. *Stenoonops halatus* sp. nov. Fig. 49, Body of female holotype from above. Fig. 50, Carapace of holotype; left lateral view. Fig. 51, Eyes of holotype from above. Fig. 52, Abdominal scuta and epigynal area of holotype from below. Figs. 53-58. *Stenoonops reductus* (Bryant). Fig. 53, Carapace of male from above. Fig. 54, Carapace of male; right lateral view; lower magnification. Fig. 55, Patella, tibia, and tarsus of left male palp; prolateral view. Fig. 56, Left palpal tarsus from below. Fig. 57-58, Epigastric and ventral scuta of male and female, respectively, from below.



Figs. 59-63. *Stenoonops noctucus* sp. nov. Fig. 59, Eyes of male holotype from above. Fig. 60, Sternum of male holotype from below. Fig. 61, Left palp of male; prolateral view. Fig. 62, Left palpal tarsus; nearly ventral view. Fig. 63, Left palpal tarsus; nearly dorsal view. Figs. 64-68. *Stenoonops padiscens* sp. nov. Fig. 64, Eyes of male from above. Figs. 65-66, Left palpal tarsus of male holotype; prolateral and ventral views, respectively. Fig. 67, Left palp of male paratype; dorso-prolateral view. Fig. 68, Carapace of described female paratype.